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NEWS - Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 Apr 08 "Ask CAS" for self-help around the clock
NEWS 3 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4 Apr 09 ZDB will be removed from STN
NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and
IFIUIB
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and
CAPLUS
NEWS 7 Apr 21 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FERIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)
now available on STN
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUIB have been reloaded
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 Indexing added to some pre-1987 records in CA/CAPLUS
NEWS 26 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 27 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002

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NEWS WWW CAS World Wide Web Site (general information)

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***** STN Columbus *****

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file reg

FILE 'REGISTRY' ENTERED AT 12:22:38 ON 29 OCT 2002
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Property values tagged with ID are from the DIO/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 7 OCT 2002 HIGHEST RN 459799-15-4
DICTIONARY FILE UPDATES: 7 OCT 2002 HIGHEST RN 459799-15-4

DATA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

silane/cn(3a)tetramethoxy/in

PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD NAME - 'AND' OPERATOR ASSUMED 'SILANE/CN(3A)TETRAMETHO'
1 SILANE/CN
0 TETRAMETHOXY/CN
1 0 SILANE/CN(3A)TETRAMETHOXY/CN

= c3h10o3si/mf

C3H10O3SI IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

c3h10o3si/mf

11 C3H10O3SI/MF

= 6 1-11 ide

1 ANSWER 1 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 241940-33-6 REGISTRY
CN Silanediol, (3-hydroxypropyl)- (9CI) (CA INDEX NAME)
FC 3D CONCORD
MF C3 H10 O3 Si
CT COM
SP CA

CH

H SiH (CH2)3OH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 ANSWER 2 OF 11 REGISTRY COPYRIGHT 2002 ACS

RN 177719-92-5 REGISTRY
CN Silanediol, (2-hydroxyethyl methyl)- (9CI) (CA INDEX NAME)
E 31 CONCORD
MF C3 H10 O3 Si
CI COM
SF CA

OH

H CH2 CH2OH

HE

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

LN ANSWER 3 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 171063-14-2 REGISTRY
CN Methanol, silyldynetris- (9CI) (CA INDEX NAME)
E 31 CONCORD
MF C3 H10 O3 Si
CI COM
SF CA

CH2 OH

H CH2 SiH CH2 OH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

LN ANSWER 4 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 159225-94-2 REGISTRY
CN Silanetriol, (1-methylethyl)- (9CI) (CA INDEX NAME)
E 3D CONCORD
MF C3 H10 O3 Si
CI COM
SF CA
LN FTN Files: CA, CAPLUS, USEPATFULL

OH

H Si-Pr-i

OH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

LN ANSWER 5 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 151103-18-3 REGISTRY
CN Silanediol, 1-ethyl-1-methoxy- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Ethyldihydroxymethoxysilane
E 31 CONCORD

MF C3 H10 O3 Si
SI CON
CA
STN Files: CA, CAPLUS

MAC 31 Et

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

11 ANSWER 6 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 144208-49-4 REGISTRY
CN Silanol, dimethoxymethyl- (9CI) (CA INDEX NAME)
OTHER NAMES:

SI Hydroxydimethoxymethylsilane

SI CONCORD

MF C3 H10 O3 Si

SI CON

SI CA

STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIMD

(*File contains numerically searchable property data)

SI

MAC 31 Me

OMe

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

11 ANSWER 7 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 37109-72-1 REGISTRY
CN Silane, tri(methoxy-d3)- (9CI) (CA INDEX NAME)
MF C3 H D9 O3 Si

STN Files: BEILSTEIN*, CA, CAPLUS

(*File contains numerically searchable property data)

OM CD3

1-OC-OC-SiH-O-CD3

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

11 ANSWER 8 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 27-67-43-2 REGISTRY
CN Silanol, [(2-hydroxyethoxy)methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:

MF Ethanol, 2-[(hydroxysilyl)methoxy]-
FI 31 CONCORD
MF C3 H10 O3 Si

H CH₃-CH₂-O-CH₂-SiH₂-OH

1 ANSWER 9 OF 11 REGISTRY COPYRIGHT 2002 ACS
FI 1512-36-1 REGISTRY
CI Silanedi 1, ethoxymethyl- (6CI, 7CI (CA INDEX NAME)
OTHER NAMES:
CI Ethoxydihydroxy (methyl) silane
FI 31 CONCORD
FI 1512-36-3
MF C3 H10 O3 Si
CI 31
STN Files: CA, CAPLUS

CH

HC Cl Me

CH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

12 ANSWER 10 OF 11 REGISTRY COPYRIGHT 2002 ACS
FI 5051-30-9 REGISTRY
CI Silanetriol, propyl- (8CI, 9CI (CA INDEX NAME)
OTHER NAMES:
CI 1-Propylneorthosiliconic acid
FI 31 CONCORD
MF C3 H10 O3 Si
CI 31
STN Files: CA, CAPLUS, IFICDB, IFIUDB, TOXCENTER, USPATFULL

CH

HC Si-Pr-n

CH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

1 ANSWER 11 OF 11 REGISTRY COPYRIGHT 2002 ACS
FI 15-7-90-3 REGISTRY
CI Silane, trimethoxy- (6CI, 7CI, 8CI, 9CI (CA INDEX NAME)
OTHER NAMES:
CI 15 330
CI Trimethoxysilane
FI 31 CONCORD

03 H10 03 Si

STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT,
CAOLD, CAPLUS, CASREACT, CEMB, GEN*, CHEMCATS, CHEMINFORMRX, CHEMLIST,
IN, CSOCHEM, DEPTHERM*, EIPER*, GELIN*, HSIB*, IFICDB, IFIPAT, IFIUDB,
KEELINE, MSIS-OHS, NIGHTING, PIRA, PROMT, RTECH*, TOXCENTER, USPAT2,
USPATFULL
*File contains numerically searchable property data
Other Sources: EINECS**, NDSL**, TSCA**
***Enter CHEMLIST File for up-to-date regulatory information

END

NAME: TETRAMETH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

836 REFERENCES IN FILE CA (1962 TO DATE)
115 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
837 REFERENCES IN FILE CAPLUS (1962 TO DATE)
14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

1 TETRAMETHYLDISILOXANE/CN

1 TETRAMETHYLDISILOXANE/CN

1 TETRAMETHYLDISILOXANE/CN

1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 01110-74-8 REGISTRY
CN Disiloxane, tetramethyl- (TOL, SCIL) (CA INDEX NAME)
OTHER NAMES:
CN Tetramethyldisiloxane
MO 04 H14 O Si2
ILS, COM
1 STN Files: CA, CAOLD, CAPLUS, CHEMCATS, CHEMLIST, CSOCHEM, IFICDB,
IFIPAT, IFIUDB, TOXCENTER, USPAT2, USPATFULL
Other Sources: EINECS**, NDSL**, TSCA**
***Enter CHEMLIST File for up-to-date regulatory information

NAME: TETRAMETHYLDISILOXANE

1 TETRAMETHYLDISILOXANE

90 REFERENCES IN FILE CA (1962 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
90 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

FILE: CA

FILE 'CA' ENTERED AT 12:29:46 ON 09 OCT 2002
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FILE CHGVERS 1907 - 3 Oct 2002 VOL 137 IAS 15
FILE LAST UPDATED: 3 Oct 2002 (21021701 ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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4 1 11

FILE 'HOME' ENTERED AT 12:21:30 ON 09 OCT 2002

FILE 'REGISTRY' ENTERED AT 12:22:38 ON 09 OCT 2002

0 S SILANE/CN(3A)TETRAMETHOXY/CN
11 S C3H10O3SI/MF
1 S TETRAMETHYLDISILOXANE/CN

FILE 'CA' ENTERED AT 12:29:40 ON 09 OCT 2002

4 1 11 or 13

849 L2
90 L3
1 934 L2 OR L3

4 1 11 PECVD#/BI,AB or PE/BI,AB(5W)CVD#/BI,AB or plasma/BI,AB(10W)(CVD# or DEPOSIT?)/BI,AB

4145 PECVD#/BI
3378 PECVD#/AB
17960 PE/BI
16476 PE/AB
47531 CVD#/BI
34188 CVD#/AB
121 PE/BI,AB(5W)CVD#/BI,AB
677326 PLASMA/BI
595266 PLASMA/AB
47531 CVD#/BI
34188 CVD#/AB
688729 DEPOSIT?/BI
578898 DEPOSIT?/AB
33167 PLASMA/BI,AB(10W)(CVD# OR DEPOSIT?)/BI,AB
1 34306 PECVD#/BI,AB OR PE/BI,AB(5W)CVD#/BI,AB OR PLASMA/BI,AB(10W)(CVD# OR DEPOSIT?)/BI,AB

4 1 11 insulating or insulator or dielectric or sic2 or sio or oxide# or oxide# (BI,AB

95959 INSULATING/BI
78114 INSULATING/AB

90742 INSULATOR/BI
 54500 INSULATOR/AB
 118479 DIELECTRIC/BI
 2144 DIELECTRIC/AB
 308627 SiO2/BI
 302850 SiO2/AB
 8407 Si1/BI
 8849 Si1/AB
 111924 DIOXIDE#/BI
 118749 DIOXIDE#/AB
 117701 DIOXIDE#/BI
 45537 DIOXIDE#/AB
 1114867 (INSULATING OR INSULATOR OR DIELECTRIC OR SiO2 OR SiC OR
 DIOXIDE#
 OF DIOXIDE#)/BI,AB

4. 3. 11. 11

FILE 'HOME' ENTERED AT 12:22:30 ON 09 OCT 2012

FILE 'REGISTRY' ENTERED AT 12:22:34 ON 09 OCT 2012

1 3 SILANE/CN/3A TETRAMETHOXY/CN
 11 3 C6H10O3SI/MF
 1 3 TETRAMETHYLDISILOXANE/CN

FILE 'CA' ENTERED AT 12:29:40 ON 09 OCT 2012

934 S L2 OR L3
 34306 S PEVD#/BI,AB OR PE/BI,AB (5V)VD#/BI,AB OR
 PE/BI,AB 10W (C
 1114867 S (INSULATING OR INSULATOR OR DIELECTRIC OR SiO2 OR SiC OR
 DIOXIDE#

= s 14 and 15 and 16

17 29 L4 AND L5 AND L6

= d 1-29 bib ab

17 ANSWER 1 OF 29 CA COPYRIGHT 2012 ACS

AM 187:40045 CA

DEPOSITION PROCESS BASED ON ORGANOSILICON PRECURSORS IN DIELECTRIC

BARRIER DISCHARGES AT ATMOSPHERIC PRESSURE-A COMPARISON

AM Sonnenfeld, A.; Tun, T. M.; Sapichova, L.; Kozlov, K. V.; Wagner, H. E.;
 Belinke, J. F.; Hippler, R.

INSTITUT FÜR PHYSIK, ERNST-MORITZ-ARNDT-UNIVERSITÄT, GREIFSWALD, GERMANY

PLASMAS AND POLYMERS (2001), 6(4), 237-260

CODEN: PLPOFQ; ISSN: 1084-2184

WILEY-INTERSCIENCE/Plenum Publishers

17 Journal

17 English

AB Dielec. barrier discharges (DBD) at atm. pressure are presented as a tool
 to create organosilicon deposits on tech. planar Al substrates (up to 15
 times, 8 cm²) by admixing small amts. of hexamethyldisiloxane (HMDSO)

AND tetraethoxysilane (TEOS) to the carrier gas of the discharges. Using
 barrier materials of different specific capacities (2.6 times, 104 and
 1.2 pF/cm²) in two electrode arrangements operated at 41 W, the influence
 of the filament properties on the deposition was studied. In comparison
 to these arrangements, a 3rd electrode setup with a barrier of the
 specific capacity of 2.9 pF/cm² is operated at approx. 50 W to study the
 influence of the specific energy of the plasma (energy per mol.
 in the deposition process. The plasma chem. process was studied
 anal. by Gas Chromatogr., and properties of the plasma-treated substrates
 were examd. by XPS, FTIR spectroscopy, as well as visually.

12 ANSWER 2 OF 29 CA COPYRIGHT 2012 ACS

AP 200111037 CA

TI Device for the production of barrier layers for gaseous and/or liquid substances on substrates, in particular plastic substrates, by means of a plasma-enhanced chemical vapor deposition in a vacuum treatment chamber

IN Applied Films G.m.b.H. & Co. K.-G., Germany

PA 2001-Gebrauchsmusterschrift, 13 pp.

CO DEN: SGXXEF

IT Patent

LA German

EMILCNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 200112984	U1	2001-05-11	DE 2001-201129-4	2001-05-11
TI A device is presented for the prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a plasma-enhanced chem. vapor deposition in a vacuum treatment chamber. In accordance with the invention, a metal, a metal compd., a semiconductor, or a semiconductor compd. is evapd. out of a crucible, and a reactive gas is flowed over a gas inlet. A plasma is formed via an anodic arc app. to coat the substrate with at least one layer of a substance having a matrix consisting of an oxide compd. with an increased carbon content.				

12 ANSWER 3 OF 29 CA COPYRIGHT 2012 ACS

AP 200101435 CA

TI Method to restore hydrophobicity in dielectric films and materials

IN Hacker, Nigel P.; Thomas, Michael; Prage, James A.

PA Honeywell International, Inc., USA

CO INT. Appl., 34 pp.

CO DEN: PIXXD2

IT Patent

LA English

EMILCNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002001621	A2	20020103	WO 2001-US19466	20010619
WO 2002001621	A3	20020621		
W: AE, AG, AL, AM, AT, AU, AC, BA, BB, BG, BR, BY, BL, CA, CH, CN, CO, CF, CU, CZ, DE, DK, DM, DO, EE, ES, FI, GB, GD, GE, GH, GM, HP, HU, ID, IL, IN, IO, JP, KE, KG, KP, KR, KZ, LG, LK, LF, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, ME, NO, ND, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TD, UA, UB, US, UZ, VH, YU, ZA, ZW, AM, AG, BY, KG, KE, ME, RU, TJ, TM RW: GH, GM, KE, LS, MW, MD, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LC, MG, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AN 2001066998	A5	20020108	AN 2001-66998	20010619
EPAI US 2000-214219P	P	20000603		
WI 2001-US19466	W	20010619		
TI SiO2 dielec. films, whether nonporous or porous SiO2 dielects. are readily damaged by fabrication methods and reagents that reduce or remove hydrophobic properties from the dielec. surface. The invention provides for methods of imparting hydrophobic properties to such damaged SiO2 dielec. films present on a substrate. The invention also provides plasma-based methods for imparting hydrophobicity to both new and damaged SiO2 dielec. films. Semiconductor devices prepd. by the inventive processes are also provided.				

12 ANSWER 4 OF 29 CA COPYRIGHT 2012 ACS

15 195:100955 CA
 16 Plasma CVD of insulator film and
 17 semiconductor device
 18 Inagura, Hiroshi; Suzuki, Tomomi; Maeda, Kazuo; Shibata, Kimi; Ohira,
 19 Masaki
 20 Nippon Sales Co., Inc., Japan; Semiconductor Process Laboratory Co., Ltd.
 21 Int. Kokai Tokkyo Koho, 9 pp.
 22 CIEN: JKXXAF

23 Patent
 24 Japanese

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001-14981	A2	2001-05-10	JP 1999-075120	1999-12-17

25 MARPAT 195:100955
 26 The title method involves carrying out a plasma reaction of $\text{Si}(\text{OR})_n\text{R}_m$, R
 27 alkyl and $n + m = 4$, SiF_4 , CF_4 , R = alkyl and $n + m = 4$, and an
 28 oxidizing gas. Alternatively, Si-F-RH_s , $s = 4$ and $s + r = 4$ in a
 29 siloxane compd. may be used. Specifically, the oxidizing gas may

30 comprise
 31 F_2 , O_2 , H_2O , or CO_2 . Addnl., a C_nH_q compd. such as CH_4 , C_2H_4 , or C_2H_6
 32 may be used. A semiconductor device having the above-**insulator**
 33 film is also described.

34 ANSWER 5 OF 29 CA COPYRIGHT 2002 ACS
 35 195:35702 CA
 36 halogen compound **dielectric** film plasma forming method and
 37 semiconductor device
 38 Shioya, Yoshimi; Kitake, Toshihiro; Yamamoto, Yoshio; Suzuki, Tomomi;
 39 Inagura, Hiroshi; Higawara, Shoji; Chira, Kouichi; Maeda, Kazuo
 40 Nippon Sales Co., Inc., Japan; Semiconductor Process Laboratory Co., Ltd.
 41 Int. Pat. Appl., 42 pp.
 42 CIEN: EPXXIW

43 Patent
 44 English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1113489	A2	2001-07-04	EP 2000-128421	2000-12-28
EP 1113489	A3	2002-06-05		

45 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 46 IE, SI, LT, LV, FI, RO
 47 JP 2002-083910 A2 2002-03-22 JP 2000-263991 2000-08-31
 48 JP 2001-034140 A1 2001-10-25 US 2000-740242 2000-12-22
 49 MARPAT 195:35702
 50 There is provided the film forming method of forming the

51 **insulating** film 204 contg. Si on the substrate 103 by plasma
 52 polymn. of the compd. having the siloxane bonds and the oxidizing gas to
 53 react with each other.

54 ANSWER 6 OF 29 CA COPYRIGHT 2002 ACS
 55 195:4979 CA
 56 Photocatalytic coating for self-cleaning automotive headlights
 57 Ho, Ing-Feng; O'Connor, Paul J.; Chiao, Yi-Hung
 58 Dow Chemical Company, USA
 59 Int. Appl., 16 pp.
 60 CIEN: PIXXD2

61 Patent
 62 English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

FI WI 2001040705 AI 20010617 WI 2000-08-017- 20010124
 W: AE, AG, AI, AM, AN, AZ, BA, BB, BG, BR, BZ, CA, CH, CN, CP, CU, CZ, DE, DK, DM, DZ, EE, EG, FI, FR, GB, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KI, KR, KU, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MO, MW, MY, NZ, PL, PT, RD, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, NE, NG, SN, TD, TG

WI 2001030876 AI 20011013 US 2000-721400 20001204
 PFI 1999-169027P P 19991203
 AB The automotive headlight lamps made of glass or plastic are coated on the internal reflector surface with a transparent layer of photocatalytic semiconductor for self-cleaning operation. The catalyst can be applied by sol-gel coating, or by chem-vapor deposition. The light in operation of the headlight is sufficient for photocatalysis of the catalyst to decrease the accumulated aq. or org. contaminants on the internal surface.

The typical sol-gel coating for polycarbonate headlight contains silicic acid, TiO₂ powder as activated semiconductor 4 parts, crosslinking E-6040 silane 25 parts, and water as the balance. The sol-gel coating is dried at 400.degree., and hardened by heating in an oven for 45 min at 120.degree..

REMARK 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

17 ANSWER 7 OF 29 CA COPYRIGHT 2002 ACS
 18 194:23353 CA
 19 Antireflection film
 20 Takematsu, Kiyotaka
 21 Dainippon Printing Co., Ltd., Japan.
 22 Esp. Kokai Tokkyo Koho, 7 pp.
 23 CIEN: JKKXAF
 24 Invent
 25 Japanese
 26 ENCL 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000328307	A2	20001208	JP 1999-150688	19990528

AB The invention refers to an antireflection film comprising a substrate, a hard coat layer, and the following layers starting at the air surface: an 80 - 110 nm low n layer, a 70 - 90 nm high n layer, a 35 - 55 nm low n layer, a 10 - 30 nm high n layer, a 35 - 55 nm low n layer, wherein the low n layer is formed via plasma CVD and using a methylated silica, and the high n layer is a metal oxide also formed via plasma CVD, in order to produce an antireflection film with good reflection properties, and good adhesion and durability of the layers.

17 ANSWER 8 OF 29 CA COPYRIGHT 2002 ACS
 18 194:160354 CA
 19 Method and apparatus for forming a porous SiO₂ interlayer insulating film
 20 Maeda, Kazuo
 21 Canon Sales Co., Inc., Japan; Semiconductor Process Laboratory Co., Ltd.
 22 Esp. Pat. Appl., 24 pp.
 23 CIEN: BPXXDW
 24 Invent
 25 English
 26 ENCL 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

EP 1039519 20000927 EP 2100-11344 20000317
 EP 1039519 A3 20000922
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, PL
 TS 2000277507 A2 20011106 JP 1991-83 19991326
 TS 3184177 B2 20010709
 EP 1999-83180 A 19990326

Enclosed is a method for forming an interlayer insulating film
 comprising the steps of: forming an underlying insulating film
 on a substrate; forming a film contg. B, C and H on the underlying
 insulating film by plasma enhanced CVD using a
 source gas contg. an Si-C-O-H compd., an oxidative gas and a compd.

contg.
 B; releasing C and H₂O in the film from the film by annealing the film,
 and thereby forming a porous SiO₂ film contg. B; and subjecting
 the porous SiO₂ film contg. B to H plasma treatment, and then
 forming a cover insulating film.

IN ANSWER 9 OF 29 CA COPYRIGHT 2002 ACS

AB 192:80445 CA

TI Overall kinetics of SiO_x remote-PECVD using different
 organosilicon monomers

AU Beyer, Ch.; Bapin, E.; Von Rohr, Ph. Rudolf

LA Institute of Process Engineering, ETH Zurich, Zurich, 8092, Switz.

CO Surface and Coatings Technology 1999, 116-119, 274-878

CIEN: SCITECH; ISSN: 0257-8912

LA Elsevier Science S.A.

LA Journal

LA English

AB Exptl. study was performed using nine different organosilicon monomers
 for the deposition of silicon oxide films by remote
 plasma-enhanced CVD. The measured deposition rates are
 interpreted with a previously developed semi-empirical model. The model
 enables the estn. of the crit. flow rates of oxygen atoms necessary to
 achieve a complete monomer conversion. The crit. flow rates can be
 correlated to the monomer structure. Starting from tetramethoxysilane

and tetraethoxysilane, the crit. flow rates of oxygen atoms increase when
 alkoxy groups are replaced by alkyl groups. A comparison between the
 methoxy/methyl and the ethoxy/ethyl series shows that monomers contg.
 ethoxy groups are easier to deposit than those contg. methoxy groups.
 These observations are discussed with respect to the possible reaction
 mechanism.

ABSTRACT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

IN ANSWER 10 OF 29 CA COPYRIGHT 2002 ACS

AB 192:17002 CA

TI Methods for applying wear protective coating systems with optical
 properties on surfaces

AU Rauschnabel, Johannes; Voigt, Johannes

LA Bosch, Robert, G.m.b.H., Germany

CO Ger. Offen., 10 pp.

CIEN: GWXXBX

LA Patent

LA German

FAM.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 19824364	A1	19991202	DE 1998-19824364	19980530
WO 9963129	A1	19991209	WO 1998-DE1326	19990504
	W:	DE, JP, US		
	RW:	AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE		
EP 1088116	A1	20010404	EP 1998-981005	19980504

R: CH, DE, FR, GB, IT, LI
 JP 2002517611 20020719 JP 2000-55241 19991524
 HAI 1998-19824364 A 19991530
 W 1999-DE1326 W 19991534

AB Methods for applying wear-resistant coating systems with optical properties on surface are described which entail a two-step deposition process, with a **plasma**-assisted CVD process being carried out to form a host matrix material layer on the substrate and a phys. vapor deposition process being carried out to introduce optically functional materials into the matrix. The coatings may be UV-reflecting or -absorbing coatings.

DT ANSWER 11 OF 29 CA COPYRIGHT 2002 ACS
 AN 191123593 CA

TI **Plasma** enhanced chemically vapor deposited thin films for microelectromechanical systems applications with tailored optical, thermal, and mechanical properties
 AU Horn, M. W.; Goodman, R. E.; Rothschild, M.
 CO Lincoln Laboratory, Massachusetts Institute of Technology, Lexington, MA, 02429, USA
 JO Journal of Vacuum Science & Technology, B: Microelectronics and Nanometer Structures (1999), 17(3), 1145-1149
 CIEN: JVTBD9; ISSN: 0734-011X
 PI American Institute of Physics
 LA English

AB Microbridge materials optimized for room temp. IR microbolometers have been fabricated using **plasma** enhanced chem. vapor deposition (PECVD). Thin films were deposited from tetramethyldisiloxane (TMDS) and oxygen. They have 4-4.5 times lower thermal cond. than that of Si₃N₄ and an inherent absorption coeff. 8-12 (um range) approx. half that of nitride. The PECVD films deposited from TMDS are compatible with current complementary metal-oxide-semiconductor processing and have been shown to have adequate mech. strength for use as microbolometer membranes.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

DT ANSWER 12 OF 29 CA COPYRIGHT 2002 ACS
 AN 1901272074 CA

TI Method for coating elastomer components
 AU Spallek, Michael; Walther, Martin; Danielzik, Burkhard; Kuhr, Markus
 CO Schott Glas, Germany
 JO Pat., 6 pp.
 CIEN: GWXXAW
 PI Patent
 LA German
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19754056	C1	19980403	DE 1997-19754056	19971205
EP 912647	A1	19990616	EP 1996-121450	19981111
EP 912647	B1	20010713		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 11263859	A2	19990923	JP 1998-341404	19981201
US 6123991	A	20000926	US 1998-205164	19981204
HAI DE 1997-19754056	A	19971205		
AB Elastomer components for medical/pharmaceutical use such as injections, infusions or piston-sprays are coated by plasma -enhanced chem. vapor deposition of siloxanes or modified silicon dioxides in a continuous process for friction redn.				

DT ANSWER 13 OF 29 CA COPYRIGHT 2002 ACS
 AN 19091967 CA

TI Silicon **dioxide** deposition by plasma activated evaporation

Process
 IN Marcovangelo, Charles Dominic
 FA General Electric Company, USA
 Eur. Pat. Appl., 7 pp.
 PRIEN: EPXXIW
 IT Patent
 EN English
 PARENT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 887438	A1	19981230	EP 898-115179	19981626
EP 887439	B1	20010630		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 8802114	A	19981026	BR 1998-2214	19981624
CA 2141078	AA	19981216	CA 1998-204107-	19981615
FI 11061678	A1	19981113	JP 1998-170141	19981613
EP 1110899	A	19981117	CN 1998-111119	19981606
EP 2149031	T3	20011111	ES 1998-30179	19981626
DE 6379757	B1	20020430	US 1999-334238	19991715
FR 1997-50820P	P	19970626		
FR 1998-59109	A	19980413		

AB A process for the deposition of scratch-resistant coatings on various substrates comprises evapn. metals or metal oxides into an Ar and N2O plasma which is directed to the surface to be coated. Thus, SiO2 was deposited on a polycarbonate.

REMARK 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

11 ANSWER 14 OF 29 CA COPYRIGHT 2002 ACS
 12 EP 887438 CA
 13 Electretive coating by nocl. rate and plasma deposition
 14 Yang, Barry Lee-Mean; Gaskwith, Steve Marc
 15 General Electric Company, USA
 16 Eur. Pat. Appl., 9 pp.
 17 PRIEN: EPXXDW

18 Patent
 19 English
 PARENT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 887437	A2	19981230	EP 1998-305076	19980626
EP 887437	A3	20010411		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6110544	A	20000829	US 1998-30776	19980709
CA 2238208	AA	19981226	CA 1998-2238214	19980521
BR 9802208	A	19990629	BR 1998-2208	19980624
CN 1210901	A	19990317	CN 1998-115071	19980625
JP 11971681	A2	19990316	JP 1998-179420	19980626
US 6432494	B1	20020613	US 2000-560851	20000428
FR 1997-50821P	F	19970626		
FR 1998-36776	A	19980319		

AB A method for depositing adherent metal oxide-based protective coatings (tetramethyldisiloxane) on glass, metal, and plastic substrates is carried out by passing a plasma gas through an arc plasma generator, directing O and a reactive plasma towards a substrate positioned on the axis of the plasma plume in a vacuum chamber so that active species

impinge within the plasma contact the surface of the substrate.

17 ANSWER 15 OF 29 CA COPYRIGHT 2002 ACS
 18 EP 8874348 CA
 19 Deposition of SiO2 films from novel alkoxysilane/O2 plasmas
 20 Bogart, K. H. A.; Ramirez, S. K.; Gonzalez, L. A.; Bogart, G. R.; Fisher, Ellen R.

Department of Chemical Engineering, University of California, San Diego, La Jolla, CA 92037-0803, USA
Journal of Vacuum Science & Technology, A: Vacuum, Surfaces, and Films
1998, 16(6), 3175-3179
CODEN: JVTAD6; ISSN: 0734-2151

American Institute of Physics

Journal

English

The deposition of SiO_2 films from novel alkoxysilane/ O_2 rf plasmas has been investigated using tetraethoxysilane and the novel alkoxysilanes, triethoxysilane, tetramethoxysilane, and trimethoxysilane. We have demonstrated that high quality SiO_2 films can be deposited from each of these alkoxysilanes under similar conditions. For all precursors, film deposition rates decrease with the adon. of O_2 . Using 20:80 alkoxysilane/ O_2 plasmas, film deposition rate decreases with increasing substrate temp. and plasma power, while the SiO_2 film quality increases, as detd. by Fourier transform IR spectroscopy, ellipsometry, and wet etch rates. Substrate temp. appears to be the most influential deposition parameter, significantly affecting both compn. and properties of the deposited SiO_2 films. Measured apparent activation energies for SiO_2 deposition from alkoxysilane/ O_2 plasmas are n-g. for all precursors. This suggests an adsorption/desorption-limited deposition mechanism controls film formation.

In all systems. Addnl. data for SiO_2 films deposited from the halogenated alkoxysilanes triethoxyfluorosilane and triethoxychlorosilane are also presented.

EXCERPT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

11 ANSWER 16 OF 29 CA COPYRIGHT 2002 ACS

12 129:87819 CA

13 Low refractive index SiO_2 film and process for producing the same

14 Ichimura, Koji

15 Dai Nippon Printing Co., Ltd., Japan

16 Int. Pat. Appl., 7 pp.

17 CODEN: EPKXDW

18 Patent

19 English

EXCERPT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 849374	A1	19980624	EP 1997-122711	19971217
EP 849374	A1	19980630		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, BG				
JP 10230561	A2	19980902	JP 1997-315992	19971031
US 2002001725	A1	20020103	US 1997-315994	19971205
EP 1996-354141	A	19961218		
EP 1997-315992	A	19971031		

20 SiO_2 films with low refractive indexes are described in which the films are doped with fluorine or a Cl-4 alkyl group in which

21 stereq.1

of the H atoms may be replaced by a fluorine atom(s). The films may be used as antireflective films. Prodn. of the films entails CVD or plasma CVD from a starting material gas comprising a gas contg. a fluorine atom, a gas contg. a silicon atom and a Cl-4 alkyl or a Cl-4 alkyl group in which stereq.1 of the H atoms may be replaced by a fluorine atom, and a gas contg. an oxygen atom. The doped SiO_2 films have a lower refractive index than undoped SiO_2 films.

22 ANSWER 17 OF 29 CA COPYRIGHT 2002 ACS

23 12-1329135 CA

24 Plasma chemical vapor deposition (CVD)

25 apparatus and manufacture of oxide film using it

17 Kudo, Yutaka; Hachitani, Masayuki; Oyama, Katsumi; Saito, Masayoshi;
Honma, Yoshio
18 Hitachi Electronics Engineering Co., Ltd., Japan; Hitachi, Ltd.
19 Jpn. Kokai Tokkyo Koho, 7 pp.
20 CIEN: JEXXAF

21 Patent
22 Japanese
23 English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10125669	A2	19960315	JP 1996-29044	19961010

24 The app. has an upper electrode connected with a high-frequency elec. power supply; a lower electrode connected with a high-frequency bias

power supply; inlets for reaction gases of Ar SiH₄ (1-3), Si₂DE₂ (4), or Si₂Me₂ as Si sources and P₂N₂ or O₂ as an oxidant; and an inlet for reactive gases of Ar and NH₃ and/or N₂H₄. The oxide film is manufd. by using the above app. under applying elec. voltage to upper and lower electrodes at 27.0-100 MHz and 0.5-18.50 MHz, resp. The app. gives oxide films with less moisture absorption and is useful for manuf. of semiconductor devices.

25 ANSWER 18 OF 29 CA COPYRIGHT 2002 ACS

26 127:74449 CA

27 Plasma chemical vapor **deposition** apparatus and manufacture of semiconductor device

28 Saito, Masayoshi; Kudo, Yutaka; Oyama, Katsumi; Hachiya, Masayuki; Honma, Yoshio

29 Hitachi, Ltd., Japan; Hitachi Electronics Engineering Co., Ltd.

30 Jpn. Kokai Tokkyo Koho, 7 pp.

31 CIEN: JEXXAF

32 Patent

33 Japanese

34 English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09167766	A2	19970624	JP 1995-12416	19951215

35 The **plasma CVD** app. is used by applying 10-20-MHz high-frequency elec. power to an upper electrode. A Si **oxide** film of the device is manufd. by using the app. from SiH₄, TEOS, TRIS,

or TRIMS. A F-contg. Si **oxide** film is manufd. by using the app. A Si **oxide** film with good moisture resistance and step coverage was obtained.

36 ANSWER 19 OF 29 CA COPYRIGHT 2002 ACS

37 127:12212 CA

38 Parallel planar electrode **plasma** chemical vapor **deposition** apparatus and manufacture of semiconductor devices

39 Saito, Masayoshi; Kudo, Yutaka; Honma, Yoshio

40 Hitachi, Ltd., Japan; Hitachi Electronics Engineering Co., Ltd.

41 Jpn. Kokai Tokkyo Koho, 10 pp.

42 CIEN: JEXXAF

43 Patent

44 Japanese

45 English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09134910	A2	19970520	JP 1995-29243	19951110

46 The app. has a mechanism to form an **insulating** film at 1-torr/0.5 torr with an optional insulators or grounded conductor

around the electrodes. A SiO₂ film may be formed from a Si source gas and O₂ or O-contg. gas, and an optional SiO₂ film may be formed thereon by application or CVD using O₃ in prepn. of semiconductor devices. A highly moisture-resistant SiO₂ film is

ANSWER 20 OF 29 CA COPYRIGHT 2002 ACS
 19940676 CA
 1 Chemical vapor deposition apparatus and manufacture of semiconductor device
 IN Saito, Masayoshi; Kudo, Yutaka; Ippoma, Yoshio; Akai, Hisahiro; Naito, Saki,
 Watanabe, Sato, Eiichi; Hachisaka, Masayuki; Suzuki, Shingei; Iijima,
 Shunpei; Nakanishi, Shigeo
 1A Hitachi Ltd, Japan; Hitachi Electr Eng
 1B Jpn. Kokai Tokkyo Koho, 5 pp.
 1C JPN: JKKXXAF

1D Patent
 1E Japanese
 1F Patent 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 19940676	A2	19940676	JP 1995-113177	19950319

A The method of the device contg. an **insulator** film involves the following steps: (1) forming the 1st **SiO₂** film on a substrate by CVD using silicon-alkoxide and O₂ at 10-100 Torr, and (2) forming the 2nd **SiO₂** film on the 1st **SiO₂** film by CVD using silicon-alkoxide and Si at a pressure of from 300 Torr to 1.5 atm. In step 1, the 1st **SiO₂** film grows uniformly without being affected by its background even if the background is Si, metal, or **insulator**. The silicon-alkoxide is Si(OC₂H₅)₄ (TEOS), for instance. The manuf. shows high step coverage. The (plasma) CVD app. for the method is also claimed.

ANSWER 21 OF 29 CA COPYRIGHT 2002 ACS
 199404212 CA
 1 Transparent, gas-barrier film
 IN Ikeda, Shin; Yamazaki, Fumiharu; Fukuda, Nobuhiko
 1A Hitachi Tratsu Chemicals, Japan
 1B Jpn. Kokai Tokkyo Koho, 7 pp.
 1C JPN: JKKXXAF

1D Patent
 1E Japanese
 1F Patent 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06281361	A1	19940119	JP 1995-93505	19950419

A The title films, useful for substrates of liq. crystal displays, have Si **oxide** layers formed by **plasma** chem. vapor **deposition** of org. Si compds. in O atm. and other Si **oxide** layers obtained by heating the films coated with liqs. contg. polysilazanes. Thus, a polysilazane xylene soln. was coated on a polyether-sulfone film (Taipa 1000) and heated at 100.degree. for 1 h to give a layer, on which Si **oxide** layer was formed by **plasma** vapor **deposition** from a mixt. of tetramethyldisiloxane and O to give a test piece showing O permeability 0.5 and vapor permeability 0.8 cm³/mm²/day.

ANSWER 22 OF 29 CA COPYRIGHT 2002 ACS
 1994089426 CA
 1 Manufacture of silicon **oxide** film by **plasma** chemical vapor **deposition** for semiconductor device
 IN Saito, Masayoshi; Ippoma, Yoshio; Kudo, Yutaka
 1A Hitachi Ltd, Japan; Hitachi Electr Eng
 1B Jpn. Kokai Tokkyo Koho, 5 pp.
 1C JPN: JKKXXAF

1D Patent
 1E Japanese
 1F Patent 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FI 08236518 19940813 JP 1995-13471 19951228
TI- Si **oxide** film contg. Si-H bonds is manufd. by **plasma**
CVD of a Si alkoxide contg. Si-H bonds and an O source. The Si
oxide film is useful as interlayer **insulating** films of
semiconductor devices. An obtained Si **oxide** film showed high
water resistance and good step coverage. ✓

FI ANSWER 23 OF 29 CA COPYRIGHT 2002 ACS

FI 12115415 CA

TI Transparent gas-barrier laminated packaging films

IN Masaki, Noboru; Yoshikawa, Masak ; Miyamoto, Takahito

SA Toppan Printing Co Ltd, Japan

SI Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

IT Patent

LA Japanese

FALLCNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	JP 08072193	A2	19960819	JP 1994-214361	19941908
	JP 3070484	B1	20110731		

AB Title films with good mech. strength, useful for packaging of foods,
drugs, fine electronic parts, etc., comprise a transparent gas-barrier of
a metal **oxide** thin layer and a C-contg. Si **oxide** thin
layer, coated on one side of a transparent polymer-base film. Thus, a
25- μ m thick PET film was coated with a 50-nm thick MgO film by vacuum
vapor deposition and overcoated with a 30-nm C-contg. Si **oxide**
film by **plasma**-excited chem. vapor deposition using
tetramethylenedisiloxane (sio), O₂, and He. The obtained film was
glue-printed and dry-laminated with an undrawn polypropylene film via
an urethane adhesive to show O permeation rates 0.68 and 0.77 mL/mL day
before and after dry-lamination, resp.

FI ANSWER 24 OF 29 CA COPYRIGHT 2002 ACS

FI 11473946 CA

TI Manufacture of semiconductor devices

IN Kubo, Tetsu; Pponma, Tetsuya

SA Nippon Electric Co, Japan

SI Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

IT Patent

LA Japanese

FALLCNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	JP 07273194	A2	19951020	JP 1994-01005	19940330
	JP 2757767	B1	19980525		

 ✓

AB The title process comprises formation of a lower **insulating** film
having a smooth surface on a Si substrate which has semiconductor devices
thereon, sequential formation of a no. of lower wiring layers thereon,
plasma CVD of a 1st SiO₂ film on the lower
wiring layers, CVD of a 2nd SiO₂ film from trialkoxysilane or
silsesquioxane hydride ((HSiO_{3/2})_{2m}, m = 4-10) inert gas
bubbling-supplied
and mixed with O₃ (or O₂), formation of a spin-on-glass film from an org.
source and etching back thereof for formation of an even surface over the
2nd SiO₂ film, **plasma** CVD of a 3rd
SiO₂ film thereon, formation of a no. of through-holes through the
1st, the 2nd, and the 1st SiO₂ film, and sequential formation of
a no. of upper wiring layers. SiH₄ with H₂O, or Si(EtO)₄,
trialkoxysilane, or silsesquioxane hydride mixed with O₂ may be used for
the 1st and the 3rd SiO₂ film. The interlayer
insulating film prepd. contains H₂O at an amt. less than that in a
film from Si(EtO)₄ and O₃, is superior in step coverage, prevents

40

the substrate resistor and forming a p-type layer on the lower surface of the upper wiring layer and hence variation of the threshold voltage, e.g.,

a MOS transistor can be suppressed.

10 ANSWER 25 OF 29 CA COPYRIGHT 2001 ACS

AI 123:356901 CA

T1 Method for depositing a **dielectric** and/or **conductive** material on a substrate

IN Stephan, Renan; Callebert, Franck

E Compagnie Europeenne d'Ingenierie Electronique S. A. Fr.

Publ. Int. Appl., 37 pp.

CLASS: PIXXD2

I Patent

LA French

FILED NO. 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9827299	A1	1998-05-11	WO 1998-00427	1998-01-04

W: CA, FI, JP, KR, US

EW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

IT 2718154 A1 1998-01-16 FR 1994-0002 1994-01-05

EP 2718154 B1 1998-04-28

EP 1994-3962 1994-04-15

MAI EP 1994-3962

MAIPAT 123:356901

A1 A method is described for depositing a dielect. and/or conductive layer on a substrate, wherein the dielect. layer is deposited in a reactor through the polymn. of components resulting from the decomn. of an organosilicon or organogermanium gas by a remote nitrogen plasma; the conductive layer is **deposited** in said reactor through the **deposition** of conductive components resulting from the decomn. of a conductive component precursor gas by said remote nitrogen plasma; said substrate is advanced so that the same portion of the substrate successively faces at least one dielect. layer deposition cavity and at least one conductive layer deposition cavity, two successive dielect.

layer

deposition cavities being supplied with a remote nitrogen plasma by a single discharge cavity, and two successive conductive layer **deposition** cavities being supplied with a remote nitrogen plasma by a single discharge cavity; and unreacted gases are removed via pumping cavities towards a vacuum pump, two successive pumping cavities being provided on each side of a dielect. layer deposition cavity or of a conductive layer deposition cavity.

10 ANSWER 26 OF 29 CA COPYRIGHT 2002 ACS

AI 123:185730 CA

T1 Forming an **insulating** film

IN Ikeda, Kazuo; Tokumasu, Noboru; Yuama, Yoshiaki

EO Canon Sales Co., Inc. Japan; Alcan-Tech Co., Inc.; Semiconductor Process Laboratory Co., Ltd.

Publ. Pat. Appl., 25 pp.

CLASS: EPXNDW

I Patent

LA English

FILED NO. 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 664560	A2	1995-07-26	EP 1995-001209	1995-01-11
EP 664560	A1	1995-01-22		
JP 07111712	A2	1995-08-11	JP 1994-0301	1994-01-25
JP 08090900	B2	1995-06-12		
US 5554570	A	1996-09-10	US 1995-071247	1995-01-09
EP 1994-6381		1994-01-25		

MAIPAT 123:185730

A1 A Si-contg. **insulating** film is formed by plasma

CVD. Objects of the present invention are to form, using a safe

reaction gas, an insulating film which is dense, and excellent step coverage, includes a small amt. of moisture and org. residue such as Si, and conforms to Si oxide films formed by thermal CVD, and also to control the refractive index and stress of the insulating film. A gas mixt. including an org. compd. having Si-H bonds and an oxidizing gas is formed into a plasma, and the Si-contg. insulating film is formed on a substrate.

10 ANSWER 27 OF 29 CA COPYRIGHT 2002 ACS
 11 122:318713 CA
 12 Solar cell sheets
 13 Fukuda, Shin; Ashida, Yoshimori; Fukuda, Nobuhiko
 14 Mitsui Toatsu Chemicals, Japan
 15 Jpn. Kokai Tokkyo Koho, 7 pp.
 16 CIEN: JKXXAF

17 Patent
 18 Japanese
 19 ABSTRACT

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 17174378	A2	19930817	JP 1993-117118	19930901

10 The solar cell sheets have amorphous Si solar cells formed on a gas carrier film. The film is preferably a polymer film laminated with SiO₂, which may be formed by plasma CVD from an org. Si compd. and O₂.

10 ANSWER 28 OF 29 CA COPYRIGHT 2002 ACS
 11 122:394204 CA
 12 Plasma-enhanced chemical vapor deposition of SiO₂ using novel alkoxysilane precursors
 13 Bogart, K. H. A.; Lallekka, N. F.; Bogart, G. R.; Fisher, Ellen R.
 14 Jpn. Chem., Colorado State Univ., Fort Collins, CO, 80523, USA
 15 Journal of Vacuum Science & Technology, A: Vacuum, Surfaces, and Films
 16 1995, 13(2), 476-80
 17 CIEN: JVTAD6; ISSN: 0734-2101

18 American Institute of Physics
 19 Journal
 20 English

21 The authors have deposited SiO₂ films on silicon and NaCl substrates from TEOS and three novel alkoxysilanes, viz. triethoxysilane, tetramethoxysilane, and trimethoxysilane. The films from all four alkoxysilanes have FTIR spectra and refractive indexes similar to those

SiO₂ and deposition rates are reasonably fast, approx. 1350 Å/min for TEOS. As the size of the alk. substituent decreases, the amt. of hydrocarbon incorporation in the films decreases. Films

deposited with the trialkoxysilanes show significant ants of Si-H bonding in their FTIR spectra, while those deposited from the tetraalkoxysilanes do not. The methoxysilanes give films with a greater SiO/CH₃ ratio but a slower deposition rate.

10 ANSWER 29 OF 29 CA COPYRIGHT 2002 ACS
 11 121:289857 CA
 12 Gas barrier type transparent electroconductive laminate for liquid crystal display

13 Fukuda, Shin; Fukuda, Nobuhiko
 14 Mitsui Toatsu Chemicals, Japan
 15 Jpn. Kokai Tokkyo Koho, 13 pp.
 16 CIEN: JKXXAF

17 Patent
 18 Japanese
 19 ABSTRACT

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

4 The title laminate comprises on a transparent polymeric film substrate a
 5 **oxide layer** and a transparent electroconductive layer,
 6 wherein the **oxide layer** is formed by low pressure
 7 **plasma CVD** using an org. Si compd. and O₂. The laminate
 8 shows superior transparency and flexibility, and is useful for liq.
 9 crystal display to repel water vapor and O₂.

10 a -1 sam

11 ANSWER 1 OF 29 CA COPYRIGHT 2002 ACS

12 74-1. (Electric Phenomena)

13 Section cross-references : 45

14 Deposition process based on organosilicon precursors in dielectric
 15 barrier discharges at atmospheric pressure--a comparison

16 **plasma CVD** barrier discharge methylsiloxane TEM
 17 mechanism

18 Streamer discharge

19 (deposition process based on organosilicon precursors in dielec.
 20 barrier discharges)

21 Polysiloxanes, properties

22 PFP (Physical, engineering or chemical process ; PFP (Properties);

23 Physical process; SPN (Synthetic preparation ; TEM (Technical or
 24 engineered material use); PPREP (Preparation); PRCN (Process); USES (Uses
 25 (deposition process based on organosilicon precursors in dielec.
 26 barrier discharges)

27 silox, properties

28 PFP (Physical, engineering or chemical process ; PFP (Properties);
 29 (Uses)

30 (deposition process based on organosilicon precursors in dielec.
 31 barrier discharges)

32 Polymerization

33 Vapor deposition process

34 (**plasma; deposition** process based on organosilicon
 35 precursors in dielec. barrier discharges)

36 64-17-5P, Ethanol, preparation 74-82-3P, Methane, preparation

37 74-84-0P, Ethane, preparation 74-85-1P, Ethylene, preparation

38 74-86-2P, Acetylene, preparation 75-76-3P, Tetramethylsilane

39 64-07-7P, Trimethylsilane 1438-82-0P, Pentamethyldisiloxane

40 30110-74-8P, Tetramethyldisiloxane

41 PFP (Byproduct); PPREP (Preparation)

42 (deposition process based on organosilicon precursors in dielec.
 43 barrier discharges)

44 7440-37-1, Argon, uses 7440-39-7, Helium, uses 7727-37-9, Nitrogen,
 45 uses

46 NUU (Other use, unclassified); USES (Uses)

47 (deposition process based on organosilicon precursors in dielec.
 48 barrier discharges)

49 74-10-4, Tetraethoxysilane 107-46-0, Hexamethyldisiloxane

50 NUU (Other use, unclassified ; RCT (Reactant); RACT (Reactant or
 51 reagent); USES (Uses)

52 (deposition process based on organosilicon precursors in dielec.
 53 barrier discharges)

54 1344-28-1, Alumina, properties 12047-27-7, Barium titanate, properties

55 PFP (Properties); TEM (Technical or engineered material use ; USES
 56 (Uses)

57 (deposition process based on organosilicon precursors in dielec.
 58 barrier discharges)

59 ANSWER 2 OF 29 CA COPYRIGHT 2002 ACS

60 LHM 0230016-40

- 311 313001-11
 312 Electric Phenomena
 Section cross-reference(s): 75
 313 device for the production of barrier layers for gaseous and/or liquid substances on substrates, in particular plastic substrates, by means of a **plasma-enhanced chemical vapor deposition** in a vacuum treatment chamber
 314 **plasma vapor deposition** barrier layer
 315 diffusion barrier
 316 semiconductor materials
 317 device for prodn. of barrier layers for gaseous and/or liq. substances
 318 on substrates, in particular plastic substrates, by means of a **plasma-enhanced chem. vapor deposition** in a vacuum treatment chamber)
 319 Vapor deposition process
 320 plasma; device for prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma-enhanced chem. vapor deposition** in a vacuum treatment chamber)
 321 **plasma-enhanced chem. vapor deposition** in a vacuum treatment chamber)
 322 Siloxanes (nonpolymeric)
 323 RCT (Reactant; RACT: Reactant or reagent)
 324 vapor deposition precursor; device for prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma-enhanced chem. vapor deposition** in a vacuum treatment chamber
 325 3344-38-1, Alumina, uses 7429-90-8, Aluminum, uses 7440-21-1, Silicon,
 326 uses 7631-86-9, Silica, uses
 327 RL: TEM (Technical or engineered material use); USES (Uses)
 328 device for prodn. of barrier layers for gaseous and/or liq. substances
 329 on substrates, in particular plastic substrates, by means of a **plasma-enhanced chem. vapor deposition** in a vacuum treatment chamber)
 330 107-40-0, Hexamethyldisiloxane 30110-74-8, Tetramethyldisiloxane
 331 RCT (Reactant; RACT: Reactant or reagent)
 332 vapor deposition precursor; device for prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma-enhanced chem. vapor deposition** in a vacuum treatment chamber)
 333
 334 ADONIS 3 OF 1P CA COPYRIGHT 2002 ACS
 335 DOI: 10.1021-315
 336 337 (Surface Chemistry and Colloids)
 338 Section cross-reference(s): 76
 339 Method to restore hydrophobicity in **dielectric** films and materials
 340 restore hydrophobicity silica dielec film surface modification
 341 Alcohols, processes
 342 RL: PEP (Physical, engineering or chemical process); RCT (Reactant; PROC (Process); RACT (Reactant or reagent)
 343 (amino, etchant; method to restore hydrophobicity in dielec. films and materials)
 344 Polishing
 345 (chem.-mech.; method to restore hydrophobicity in dielec. films and materials)
 346 Sputtering
 347 (copper; method to restore hydrophobicity in dielec. films and materials)
 348 Acids, processes
 349 Alcohols, processes
 350 Alkyls, processes
 351 Amines, processes
 352 RL: RL, processes

RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PFOC (Process); PACT (Reactant or reagent)
 etchant; method to restore hydrophobicity in dielec. films and materials
 16 Disesquioxanes
 RL: PEP (Physical, engineering or chemical process); PFOC (Process film; method to restore hydrophobicity in dielec. films and materials)
 Materials
 17 Dielectric films
 Semiconductor device fabrication
 method to restore hydrophobicity in dielec. films and materials
 18 Amino
 oxygen; method to restore hydrophobicity in dielec. films and materials
 19 Vapor deposition process
 plasma, silicon nitride; method to restore hydrophobicity in dielec. films and materials
 20 Plasma
 surface treatment; method to restore hydrophobicity in dielec. films and materials
 21 Amines, processes
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PFOC (Process); PACT (Reactant or reagent)
 triamines, etchant; method to restore hydrophobicity in dielec. films and materials
 22 1088-89-5, Silicon nitride, processes
 RL: PEP (Physical, engineering or chemical process); PFOC (Process)
 PECVD; method to restore hydrophobicity in dielec. films and materials
 23 7447-25-7, Tantalum, processes
 RL: PEP (Physical, engineering or chemical process); PFOC (Process)
 barrier lined film; method to restore hydrophobicity in dielec. films and materials
 24 7440-50-8, Copper, processes
 RL: PEP (Physical, engineering or chemical process); PFOC (Process)
 copper seed layer; method to restore hydrophobicity in dielec. films and materials
 25 61-00-4, processes 64-17-5, Ethanol, processes 64-18-6, Formic acid, processes 64-19-7, Acetic acid, processes 67-63-0, 2-Propanol, processes 68-12-2, Dimethylformamide, processes 75-59-2, Tetramethylammonium hydroxide 100-36-7, N,N-Diethylethylenediamine 117-15-3, Ethylenediamine, processes 112-46-0, Diethylenetriamine 121-44-8, Triethylamine, processes 127-18-3, Dimethylacetamide 141-43-5, Ethanolamine, processes 872-50-4, processes 1336-21-3, Ammonium hydroxide 7664-38-2, Phosphoric acid, processes 7664-39-3, Hydrofluoric acid, processes 7664-39-8, Sulfuric acid, processes 7613-49-8, Hydroxyl amine, processes 10381-12-1, Tetramethylammonium acetate 12125-01-8, Ammonium fluoride 14473-38-8, Silanol
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PFOC (Process); PACT (Reactant or reagent)
 etchant; method to restore hydrophobicity in dielec. films and materials
 26 7697-87-2, Nitric acid, processes
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PFOC (Process); USES (Uses)
 in silica precursor; method to restore hydrophobicity in dielec. films and materials
 27 174794-67-3, Amberjet 4200
 RL: CAT (Catalyst use); USES (Uses)
 (method to restore hydrophobicity in dielec. films and materials)
 28 8-5809-99-4, EKC 630
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PFOC (Process); USES (Uses)
 method to restore hydrophobicity in dielec. films and materials
 29 7611-86-9, Silica, processes

nanoporous films method to restore hydrophobicity in dielec. films

materials

- IT 73-79-6, Methyltrichlorosilane 11125-78-3, Trichlorosilane
RI: PEP (Physical, engineering or chemical process); RCT (Reactant; PROC process); RACT (Reactant or reagent)

(nanoporous silica film precursor; method to restore hydrophobicity in dielec. films and materials)

- IT 74-42-8, Methane, processes 1113-74-0, Hydrogen, processes 1727-37-8, Nitrogen, processes 7782-41-4, Fluorine, processes 7782-44-7, Oxygen, processes

RI: PEP (Physical, engineering or chemical process; RCT (Reactant; PROC process); RACT (Reactant or reagent)

(plasma treatment of silica film; method to restore hydrophobicity in dielec. films and materials)

- IT 7493-37-1, Argon, processes

RI: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(silane plasma; method to restore hydrophobicity in dielec. films and materials)

- IT 801-94-9, Methylsilane

RI: PEP (Physical, engineering or chemical process; RCT (Reactant; PROC process); RACT (Reactant or reagent)

(silane plasma; method to restore hydrophobicity in dielec. films and materials)

- IT 75-16-4, Tetraethoxysilane

RI: PEP (Physical, engineering or chemical process; RCT (Reactant; PROC process); RACT (Reactant or reagent)

(silica precursor; method to restore hydrophobicity in dielec. films and materials)

- IT 88-12-0, 3-Pentanone

RI: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(solvent for surface modifier; method to restore hydrophobicity in dielec. films and materials)

- IT 112-35-6, Triethyleneglycol monomethyl ether

RI: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(solvent in silica precursor; method to restore hydrophobicity in dielec. films and materials)

- IT 113-43-0, 2-Heptanone

RI: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(surface modifier solvent; method to restore hydrophobicity in dielec. films and materials)

- IT 9153-34-3, Methyltriacetoxysilane

RI: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); RCT (Reactant; PROC (Process); RACT (Reactant or reagent);

USES (Uses)

(surface modifier; method to restore hydrophobicity in dielec. films and materials)

- IT 75-77-4, Trimethylchlorosilane, processes 75-79-6, Dimethyldichlorosilane 78-62-6, Dimethyldiethoxysilane 107-46-0, Hexamethyldisiloxane 597-52-4, Triethylsilanol 791-31-1, Triphenylsilanol 947-42-2, Diphenylsilanediol 993-17-7, Trimethylsilane 998-30-1, Triethoxysilane 999-97-3, Hexamethyldisilazane 1056-40-6, Trimethylsilanol 1111-74-0, Dimethylsilane 1112-39-6, Dimethyldimethoxysilane 1185-55-3, Methyltrimethoxysilane 1825-61-2, Trimethylmethoxysilane 1825-61-3, Trimethylethoxysilane 2182-66-1, Methyltriethoxysilane 2182-66-1, Triacetoxysilane 2345-39-2 2487-90-3, Trimethoxysilane 2754-27-0, Acetoxymethyltrimethylsilane 5683-31-8D, 2-Propynoic acid,

- trimethylsilyl esteramide 18142-54-1, Phenylmethoxysilane
 n-Trimethylsilyl acetamide 18142-54-1, Phenylmethoxysilane
 18156-74-6, n-(Trimethylsilyl) imidazole 18173-44-3, tert-
 Butyldimethylsilanol 18181-77-9, 57915-56-9, Hexamethyltrisilazane
 PE: PEP (Physical, engineering or chemical process); RCT (Reactant; PFCO
 process); RACT (Reactant or reagent)
 surface modifier; method to restore hydrophobicity in dielec. films
 and materials)

1 ANSWER 4 OF 29 CA COPYRIGHT 2002 ACS

1 ISM H01L021-316

1 IC-8 (Electric Phenomena)

1 Plasma CVD of insulator film and semiconductor device

1 plasma CVD insulator film semiconductor device

1 Dielectric films

1 semiconductor device fabrication

1 semiconductor devices

1 plasma CVD of insulator film and semiconductor device

1 Siloxanes (nonpolymeric)

1: NUU (Other use, unclassified; USES (Uses)

1 plasma CVD of insulator film and semiconductor device

1 Vapor deposition process

1 plasma; plasma CVD of insulator film and semiconductor device

1 74-80-8, Methane, uses 74-84-1, Ethane, uses 74-85-1, Ethylene, uses

74-70-3, Tetramethylsilane 78-10-4, Tetraethoxysilane 124-38-9.

1: 1

1 dioxide, uses 356-67-1, Fluorotriethoxysilane 156-67-2

1 101-6-7, Tetraethylsilane 681-84-5, Tetramethoxysilane 994-49-4

1 101-10-1, Triethoxysilane 2370-88-9 2487-90-3,

Trimethoxysilane 2973-29-7 3077-26-7 7732-18-5, Water, uses

77-82-44-7, Oxygen, uses 10124-37-1, Nitrogen oxide (N2O), uses

101-10-7 10480-13-1, Fluorotrimethoxysilane 72453-92-1

1: NUU (Other use, unclassified; USES (Uses)

1 plasma CVD of insulator film and semiconductor device.

1 ANSWER 5 OF 29 CA COPYRIGHT 2002 ACS

1 ISM H01L021-316

1 IC-8 C23C016-40

1 IC-10 (Electric Phenomena)

1 Section cross-reference 35, 38

1 silicon compound dielectric film plasma forming method and semiconductor device

1 plasma CVD polysiloxane dielec film; alkylsiloxane

1 plasma CVD dielec film; cyclosiloxane plasma

1 CVD dielec film

1 Silsesquioxanes

1: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP

1 Preparation); PROC (Process); USES (Uses)

1 Me; silicon compd. dielec. film plasma forming method and semiconductor device)

1 Fluoride glasses

1 Silicate glasses

1: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP

1 Preparation); PROC (Process); USES (Uses)

1 fluorosilicate; silicon compd. dielec. film plasma forming method and semiconductor device)

1 Silsesquioxanes

1: PEP (Physical, engineering or chemical process); SPN (Synthetic

Preparation); TEM (Technical or engineered material use); SEM (Synthetic preparation); PROC (Process); USES (Uses)
hydrogen; silicon compd. dielec. film plasma forming method and semiconductor device

IV Polymerization
Vapor deposition process
(plasma; silicon compd. dielec. film plasma forming method and semiconductor device)

VI Dielectric films
Oxidizing agents
(silicon compd. dielec. film plasma forming method and semiconductor device)

VII polysiloxanes
Noble gases, processes
Siloxanes (nonpolymeric)
RI: UNK (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(silicon compd. dielec. film plasma forming method and semiconductor device)

VIII polysiloxanes, processes
RI: PEP (Physical, engineering or chemical process); SEN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(silicon compd. dielec. film plasma forming method and semiconductor device)

IX 67-56-1, Methanol, processes 73-76-3, Tetramethylsilane 73-79-1, Tetraethoxysilane 137-48-3, Hexamethyldisiloxane 124-38-9, Carbon dioxide, processes 556-87-2, Octamethylcyclotetrasiloxane 681-34-5, Tetramethoxysilane 994-49-9, Hexamethyldisiloxane 993-30-1, Triethoxysilane 2371-88-8, Tetramethylcyclotetrasiloxane 2487-90-3, Trimethoxysilane 3271-26-7, 1,1,3,3-Tetramethyldisiloxane 7440-57-1, Argon, processes 7440-59-7, Helium, processes 7440-41-7, Ammonia, processes 7782-32-6, Water, processes 7732-44-7, Oxygen, processes 7803-62-5, Silane, processes 10024-97-2, Dinitrogen oxide, processes 14066-10-7, Tetraethylcyclotetrasiloxane
RI: UNK (Other use, unclassified); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process); USES (Uses)
(silicon compd. dielec. film plasma forming method and semiconductor device)

ANSWER 6 OF 29 CA COPYRIGHT 2002 ACS

ICM F21V003-04
ICS F21V007-22; C09K103-18; G02B001-10; G23C016-40; G23C017-25

67-1 (Ceramics)
Section cross-references: 33, 74

Photocatalytic coating for self-cleaning automotive headlights
automotive headlight photocatalytic cleaning semiconductor coating
Semiconductor materials
(coating with; photocatalytic coating with semiconductor for self-cleaning automotive headlights)

Acrylic polymers, uses
Glass, uses
Plastics, uses
Polycarbonates, uses
RI: DEV (Device component use); USES (Uses)
(headlight, coating of; photocatalytic coating with semiconductor for self-cleaning automotive headlights)

Electric lamps
(headlights, self-cleaning; photocatalytic coating with semiconductor for self-cleaning automotive headlights)

Catalysts
(photochem., coating with; photocatalytic coating with semiconductor for self-cleaning automotive headlights)

2530-83-8, Z-6040
RI: MOA (Modifier or additive use); USES (Uses)

binder, coating contg.; photocatalytic coating with semiconductor
 self-cleaning automotive headlights)
 17 31-7-36-3, Tetraethoxytitanium 30110-74-8, Tetramethyl
 siloxane
 18 MIA (Modifier or additive use); USES (Uses)
 coating contg. **plasma-deposited**; photocatalytic
 coating with semiconductor for self-cleaning automotive headlights
 19 31-7-70-0, Anatase 7611-86-9, Silica, uses
 20 MIA (Modifier or additive use); USES (Uses)
 colloidal, coating contg.; photocatalytic coating with semiconductor
 for self-cleaning automotive headlights
 21 31-7-83-6, Polystyrene 9003-56-9 25667-42-9
 22 DEV (Device component use); USES (Uses)
 headlight; photocatalytic coating with semiconductor for
 self-cleaning
 automotive headlights

1 ANSWER 7 OF 29 CA COPYRIGHT 2002 ACS
 2 IBM H02B001-11
 3 IBM H02B007-02
 4 76-11 (Optical, Electron. and Mass Spectroscopy and Other Related
 Properties)
 5 Antireflection film
 6 antireflection film silica titania **plasma CVD**
 7 anti-reflective films
 8 antireflection film
 9 Vapor deposition process
 10 plasma; antireflection film
 11 76-1-86-9, Silica, uses 3463-87-7, Titania, uses
 12 DEV (Device component use); USES (Uses)
 antireflection film)
 13 31-7-46-0, Hexamethyldisiloxane 546-68-9, Titanium tetraisopropoxide
 30110-74-8, Tetramethyl disiloxane
 14 PEP (Physical, engineering or chemical process); PROC (Process)
 antireflection film)

17 ANSWER 8 OF 29 CA COPYRIGHT 2002 ACS
 1 IBM H01L021-312
 2 IBM H01L021-769; H01L021-532; H01L021-316
 3 76-1 (Electric Phenomena)
 4 Method and apparatus for forming a porous SiO2 interlayer
 5 **insulating film**
 6 porous silica film interlayer **insulator film**; plasma
 7 CVD alkoxysilane silica porous film; degassing silica porous film
 8 Annealing
 9 Degassing
 10 Oxidizing agents
 11 for forming porous silica interlayer **insulating film**
 12 Dielectric films
 13 method and app. for forming porous silica interlayer
 14 **insulating film**
 15 Metals, processes
 16 DEV (Device component use); PEP (Physical, engineering or chemical
 process); PROC (Process); USES (Uses)
 (method and app. for forming porous silica interlayer
 17 **insulating film** for)
 18 Vapor deposition apparatus
 19 (plasma; for forming porous silica interlayer **insulating**
 film)
 20 Vapor deposition process
 21 (plasma; method and app. for forming porous silica interlayer
 22 **insulating film**)
 23 76-10-4 998-80-1, Triethoxysilane 2171-96-2, Methoxysilane
 2487-90-3, Trimethoxysilane 5314-52-3, Dimethoxysilane
 7411-37-1, Argon, uses 7440-39-7, Helium, uses 7782-44-7, Oxygen,

- 11028-15-6, Ozone, uses 11028-15-6, Eth. Hydroxide 10115-04-0,
 diethoxysilane 87-48-7, diborane 78155-02-4, dimethoxymethoxysilane
 145533-02-8 19551-61-4
- FI: NUU (Other use, unclassified; USES (Uses
 for forming porous silica interlayer insulating film
- 11 7440-42-8D, Boron, compounds, processes
 RI: NUU (Other use, unclassified; PEP (Physical, Engineering or chemical
 process); PPOC (Process; USES (Uses)
 for forming porous silica interlayer insulating film
- 11 111-38-3P, Carbon dioxide, processes 7782-18-31, Water,
 processes
 RI: PEP (Physical, engineering or chemical process; PMU (Preparation,
 unclassified); REM (Removal or disposal); PREP (Preparation; PPOC
 (Process)
 (for forming porous silica interlayer insulating film
- 11 7891-36-9P, Silica, processes
 RI: PEP (Physical, engineering or chemical process); SEN (Synthetic
 preparation); TEM (Technical or engineered material use); PREP
 (Preparation); PPOC (Process); USES (Uses
 (method and app. for forming porous silica interlayer
 insulating film)
- 11 1333-74-0, Hydrogen, processes
 RI: NUU (Other use, unclassified; PEP (Physical, engineering or chemical
 process); PPOC (Process; USES (Uses)
 plasma; for forming porous silica interlayer insulating
 film)
- 11 7440-42-8, Boron, uses
 RI: MOA (Modifier or additive use); USES (Uses)
 silica depant; for forming porous silica interlayer insulating
 film)
- 11 ANSWER 9 OF 29 CA COPYRIGHT 2002 ACS
 11 41-41 (Industrial Inorganic Chemicals)
 11 Overall kinetics of SiOx remote-PECVD using different
 organosilicon monomers
 11 silicon oxide plasma CVD; organosilicon
 monomer silicon oxide plasma CVD
 11 Reaction kinetics
 overall kinetics of SiOx remote-plasma enhanced CVD
 using different organosilicon monomers
 11 Vapor deposition process
 plasma; overall kinetics of SiOx remote-plasma
 enhanced CVD using different organosilicon monomers)
- 11 78-07-9, Ethyltriethoxysilane 78-10-4 78-62-6, Dimethyldiethoxysilane
 117-46-0, Hexamethyldisiloxane 681-84-5 1185-35-3 1825-61-2,
 Trimethylmethoxysilane 1625-62-3, Trimethylethoxysilane
 30110-74-8, Tetramethyldisiloxane
 RI: RCT (Reactant; RACT (Reactant or reagent)
 (overall kinetics of SiOx remote-plasma enhanced CVD
 using different organosilicon monomers)
- 11 78-11-46-PDF, Silicon oxide, nonstoichiometric
 RI: SEN (Synthetic preparation); PREP (Preparation)
 (overall kinetics of SiOx remote-plasma enhanced CVD
 using different organosilicon monomers)
- 11 ANSWER 10 OF 29 CA COPYRIGHT 2002 ACS
 11 ICM C23C016-30
 11 ICS C23C014-34
 11 78-11 (Optical, Electron, and Mass Spectroscopy and Other Related
 Properties)
 Section cross-references: 42, 75
 11 Methods for applying wear protective coating systems with optical
 properties on surfaces
 11 composite optical wear resistant coating two step deposition
 11 coating materials
 UV-absorbing; application of wear-resistant protective coating
 systems

- with optical properties to surfaces)
- 15 Coating materials
 - UV-resistant; application of wear-resistant protective coating systems with optical properties to surfaces
- 16 Sputtering
 - application of wear-resistant protective coating systems with optical properties to surfaces
- 17 Oxides
 - carbides
 - fluorides, uses
 - nitrides
 - selenides
 - sulfides
 - silicides, uses
 - RE: DEV (Device component use); REP (Physical, Engineering or chemical process); FPOG (Process); USES (Uses)
 - application of wear-resistant protective coating systems with optical properties to surfaces
- 18 oxides (inorganic), uses
 - RE: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 - application of wear-resistant protective coating systems with optical properties to surfaces
- 19 Vapor deposition process
 - (phys.); application of wear-resistant protective coating systems with optical properties to surfaces
- 20 Vapor deposition process
 - plasma; application of wear-resistant protective coating systems with optical properties to surfaces
- 21 Coating materials
 - scratch-resistant; application of wear-resistant protective coating systems with optical properties to surfaces
- 22 74-82-7, Methane, uses 74-84-1, Ethane, uses 74-85-1, Ethylene, uses 74-86-2, Acetylene, uses 75-76-3, Tetramethyldisilane 78-10-4
- 78-12-5, Dimethyldiethoxy silane 107-46-1, Hexamethyldisiloxane 999-97-3, Hexamethyldisilazane 1135-55-3 1450-14-2, Hexamethyldisilane 30110-74-8, Tetramethyldisiloxane 30110-75-9, Divinyldimethyltetramethyldisiloxane
- RE: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
- application of wear-resistant protective coating systems with optical properties to surfaces
- 23 ANSWER 11 OF 29 CA COPYRIGHT 2002 ACS
- 24 76-3 (Electric Phenomena)
- 25 plasma enhanced chemically vapor deposited thin films for microelectromechanical systems applications with tailored optical, thermal, and mechanical properties
- 26 plasma enhanced chem vapor deposition thin films; microelectromech system chem vapor deposition thin film
- 27 Optical detectors
 - (IF, bolometers; fabrication of microbridge materials optimized for room temp. IR microbolometers)
- 28 Membranes, microbolometer
 - deposition of thin films from tetramethyldisiloxane and oxygen for (as microbolometer membrane)
- 29 Superconductor microbridges
 - (fabrication of microbridge materials optimized for room temp. IR microbolometers)
- 30 Micromachines

Semiconductor films
plasma enhanced chem. vapor deposited thin film
for microelectromech. systems applications with tailored optical,
thermal, and mech. properties

- 17 Vapor deposition process
plasma; plasma enhanced chem. vapor
deposited thin films for microelectromech. system application
with tailored optical, thermal, and mech. properties
17 732-44-7, Oxygen, reactions 30110-74-8, Tetramethyldisiloxane
RI: RCT (Reactant); RACT (Reactant or reagent)
deposition of thin films from tetramethyldisiloxane and oxygen

17 ANSWER 13 OF 29 CA COPYRIGHT 2002 ACS

17 ILM C23C016-44

17 ILS C08J007-04; C09D193-14; C23C015-24

17 13-8 (Pharmaceuticals)

17 See then cross-reference 1 : 39, 42

17 Method for coating elastomer components

17 coating elastomer component vapor deposition medical

17 Drug delivery systems

17 infusions; method for coating elastomer components for medical uses
for friction redn.

17 Drug delivery systems

17 injections; method for coating elastomer components for medical uses
for friction redn.

17 Apparatus

17 Coating materials

17 (medical; method for coating elastomer components for medical uses for
friction redn.)

17 Drug delivery systems

17 Films

17 Implants

17 Medical goods

17 Spray atomizers

17 (method for coating elastomer components for medical uses for friction
redn.)

17 Siloxanes (nonpolymeric)

17 RI: PEP (Physical, engineering or chemical process); THU (Therapeutic

17 use); BIOL (Biological study); PROC (Process); USES (Uses)

17 (method for coating elastomer components for medical uses for friction
redn.)

17 Friction

17 sliding; method for coating elastomer components for medical uses for
friction redn.

17 Friction

17 static friction; method for coating elastomer components for medical
uses for friction redn.

17 117-46-0, Hexamethyldisiloxane 7631-86-9, Silicon dioxide,
biological studies 30110-74-8, Tetramethyldisiloxane

17 RI: PEP (Physical, engineering or chemical process); THU (Therapeutic

17 use); BIOL (Biological study); PROC (Process); USES (Uses)

17 (method for coating elastomer components for medical uses for friction
redn.)

17 1333-74-0, Hydrogen, biological studies 7441-44-1, Carbon, biological
studies 7727-37-9, Nitrogen, biological studies

17 RI: PEP (Physical, engineering or chemical process); THU (Therapeutic

17 use); BIOL (Biological study); PROC (Process); USES (Uses)

17 Silicon dioxide contg.; method for coating elastomer
components for medical uses for friction redn.

17 ANSWER 13 OF 29 CA COPYRIGHT 2002 ACS

17 ILM C23C014-08

17 ILS C23C014-10; C23C014-20; C23C014-32

17 42-15 (Coatings, Inks, and Related Products)

17 See then cross-reference 1: 38

17 Silicon dioxide deposition by plasma activated evaporation

process
 17 polycarbonate abrasion-resistant coating silicon; plasma coating silica
 polycarbonate; argon nitrous oxide plasma coating
 17 coating materials
 abrasion-resistant; silicon dioxide deposition by plasma
 activated evapn. process on polycarbonates
 17 Vapor deposition process
 chem., plasma enhanced; silicon dioxide
 deposition by plasma activated evapn. process on
 polycarbonates
 17 films, miscellaneous
 17 MIS Miscellaneous
 metal oxide deposition by plasma activated evapn. process on
 plastics)
 17 Metals, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (metal oxide deposition by plasma activated evapn. process on
 plastics)
 17 oxides (inorganic), reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (metal oxide deposition by plasma activated evapn. process on
 plastics)
 17 Electron beams
 Plasma
 silicon dioxide deposition by plasma activated
 evapn. process on polycarbonates
 17 Silazanes
 RL: RCT (Reactant); RACT (Reactant or reagent)
 silicon dioxide deposition by plasma activated evapn.
 process on polycarbonates
 17 Polycarbonates, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 silicon dioxide deposition by plasma activated evapn.
 process on polycarbonates
 17 Silanes
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (siloxanes; silicon dioxide deposition by plasma activated
 evapn. process on polycarbonates)
 17 7429-90-5, Aluminum, reactions 7440-32-6, Titanium, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (metal oxide deposition by plasma activated evapn. process on
 plastics)
 17 7440-37-1, Argon, uses 7781-44-7, Oxygen, uses 10024-37-1, Nitrogen
 oxide (N2O), uses
 RL: DEV (Device component use); USES (Uses)
 plasma; silicon dioxide deposition by
 plasma activated evapn. process on polycarbonates
 17 7811-86-9, Silica, uses
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 TEM
 (Technical or engineered material use); PROC (Process); USES (Uses)
 silicon dioxide deposition by plasma activated evapn.
 process on polycarbonates
 17 78-16-4, Tetraethyl orthosilicate 107-46-0, Hexamethyldisiloxane
 816-67-2, Octamethylcyclotetrasiloxane 1450-14-2, Hexamethyldisilane
 2476-83-9, Tetramethylcyclotetrasiloxane 7440-31-3, Silicon, reactions
 30110-74-8, Tetramethyldisiloxane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (silicon dioxide deposition by plasma activated evapn.
 process on polycarbonates)
 17 ANSWER 14 OF 29 CA COPYRIGHT 2002 ACS
 17 TEM C23C016-40
 17 ILS C23C016-30; C23C016-50
 17 21-2 (Plastics Fabrication and Uses)
 section cross-references : 42

- 10 abrasive resistant plasma coating; tetramethyldisiloxane vapor deposition coating; arc plasma deposition metal oxide
- 11 coating materials
 - abrasion-resistant; protective coating by high rate arc plasma deposition)
- 12 Vapor deposition process
 - (chem.; protective coating by high rate arc plasma deposition)
- 13 Coating process
 - plasma spraying; protective coating by high rate arc plasma deposition
- 14 Coating process
 - (protective coating by high rate arc plasma deposition)
- 15 75-10-4 107-46-6, Hexamethyldisiloxane 554-87-1, Tetramethylcyclotetrasiloxane 1314-13-1, Zinc oxide, uses 471-14-2, Hexamethylsilane 1870-88-9, Tetramethylcyclotetrasiloxane 701-86-8, Silicon oxide, uses 13463-87-7, Titanium dioxide, uses 30110-74-8, Tetramethyldisiloxane
 - PL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 - protective coating by high rate arc plasma deposition

16 ANSWER 15 OF 29 CA COPYRIGHT 2002 ACS

17 75-3 (Electric Phenomena)

18 Section cross-reference(s): 73

19 Deposition of SiO₂ films from novel alkoxysilane/O₂ plasmas

20 PECVD silica alkoxysilane plasma

21 Silanes

22 EL: ECT (Reactant); EACT Reactant or reagent
(alkoxy; deposition of SiO₂ films from novel alkoxysilane/O₂ plasmas)

23 Activation energy

24 Semiconductor device fabrication

25 deposition of SiO₂ films from novel alkoxysilane/O₂ plasmas

26 Vapor deposition process

27 plasma; deposition of SiO₂ films from novel alkoxysilane/O₂ plasmas)

28 7031-86-9P, Silica, processes

29 EL: DEV (Device component use); PEP (Physical, engineering or chemical process); PMU (Preparation, unclassified); PREP (Preparation); PROC (Process); USES (Uses)

30 deposition of SiO₂ films from novel alkoxysilane/O₂ plasmas

31 75-13-4, TEOS 358-86-1, Fluorotriethoxysilane 681-84-5, TMOS

32 208-80-1, Triethoxysilane 2487-90-3, Trimethoxysilane

33 4867-99-6, Chlorotriethoxysilane 7782-46-7, Oxygen, reactions

34 EL: ECT (Reactant); EACT Reactant or reagent
(deposition of SiO₂ films from novel alkoxysilane/O₂ plasmas)

35 7440-21-3, Silicon, processes

36 EL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

37 (substrates; deposition of SiO₂ films from novel alkoxysilane/O₂ plasmas)

38 ANSWER 16 OF 29 CA COPYRIGHT 2002 ACS

39 IEX 0230016-41

40 IET 0230016-50; FLEB111-11

41 75-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

42 Section cross-reference(s): 75

43 Low refractive index SiO₂ film and process for producing the film

44 fluorine dopant silica antireflective film

45 Vapor deposition process

178 C23C016-18; C23C016-40; C23C016-50; H01L021-210

- 1 ANSWER 19 OF 29 CA COPYRIGHT 2002 ACS
2 H01L0021-31
3 H01L0021-31; H01L0021-31
4 (Electric phenomena)
5 Section cross-reference : 75
6 Parallel planar electrode **plasma** chemical vapor
7 **deposition** apparatus and manufacture of semiconductor devices
8 parallel planar electrode- **plasma** CVD app; silica
9 **plasma** CVD semiconductor device
10 Semiconductor devices
11 parallel planar electrode **plasma** CVD of silica
12 films in prepn. of devices
13 Vapor deposition process
14 **plasma**, parallel planar electrode; formation of silica film at low
15 chamber pressures in prepn. of semiconductor devices
16 Vapor deposition apparatus
17 **plasma**, parallel planar electrode; generation of **plasma** at
18 low chamber pressure for deposition of insulating
19 films)
20 T611-86-9P, Silica, processes
21 FI: DEV (Device component use); PEP (Physical, engineering or chemical
22 process); SPN (Synthetic preparation); PREP (Preparation); PROC
23 (Process)
24 (Uses)
25 (film; parallel planar electrode **plasma** CVD for
26 semiconductor devices)
27 1-8890-22-0, Fluorodipropoxysilane
28 FI: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
29 process); PREP (Preparation); USES (Uses)
30 (source gas; for parallel planar electrode- **plasma** CVD of silica
31 films)
32 1-8890-21-9, Fluorodimethoxysilane 1-8890-21-9, Fluorodimethoxysilane
33 2487-90-3, Trimethoxysilane 13405-71-8, Trifluorosilane-
34 13424-36-7, Difluorosilane (SiH2F2) 30486-18-1, Fluorotrimethoxysilane
35 13321-91-1, Fluorotripropoxysilane 13348-94-2, Fluorodimethoxysilane
36 1-8890-21-9, Fluorodimethoxysilane
37 FI: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
38 process); PROC (Process); USES (Uses)
39 (source gas; for parallel planar electrode **plasma** CVD
40 of silica films)

- 1 ANSWER 20 OF 29 CA COPYRIGHT 2002 ACS
2 H01L0021-31
3 H01L0021-31; H01L0021-31
4 (Electric phenomena)
5 Section cross-reference : 75
6 Chemical vapor deposition apparatus and manufacture of semiconductor
7 device
8 **insulator** film semiconductor device; ozone alkoxide
9 **insulator** semiconductor device
10 Semiconductor devices
11 CVD app. and manuf. of semiconductor device
12 Vapor deposition process
13 **plasma**; CVD app. and manuf. of semiconductor
14 device)
15 T611-86-9P, Silica, processes
16 FI: DEV (Device component use); IMF (Industrial manufacture); PEP
17 (Physical, engineering or chemical process); PREP (Preparation); PROC
18 (Process); USES (Uses)
19 (CVD app. and manuf. of semiconductor device)
20 1-10-4, TEOS 681-84-5, Tetramethyl orthosilane 1-8890-21-9, Fluorodimethoxysilane
21 2487-90-3, Trimethoxysilane 13405-71-8, Trifluorosilane
22 processes

B32B027-01; B32B029-01; B32B031-01; B32B033-01; B32B035-01

Medal Cross - Reference

has been using the several types of carrier films.

oxide. Various authors have reported that the addition of a small amount of water to the reaction mixture can improve the polymerization of α,β -unsaturated ketones. The effect of water on the polymerization of methyl vinyl ketone (MVK) has been studied by several authors. The results show that the addition of a small amount of water to the reaction mixture can improve the polymerization of MVK. The effect of water on the polymerization of MVK is shown in Table I. The results show that the addition of a small amount of water to the reaction mixture can improve the polymerization of MVK. The effect of water on the polymerization of MVK is shown in Table I. The results show that the addition of a small amount of water to the reaction mixture can improve the polymerization of MVK.plasma; transparent 100- μ m-thick films having a thickness

vacuum deposition, for ltr. crystal display

1. 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348

polyethylene, films; non-porous gas-carrier films having surface

1. Polyethers, uses

polyethylene-, films; transparent gas-barrier films having ethylene

oxide layers, for ins. and metal display

(silicon oxide; transparent var-barrier films having silicon

oxide layers, for ins. overl. they lay

Q: FANT (Feastant) : FANT Re-feastant (Y re-feastant)

transparent anti-reflex films having silicon oxide layers

produced from polycrystalline, for liq. crystal display

17. Liquid crystal display

independent films.

transparent gas-barrier films having silicon oxide layers,

```
for i in $(cat /dev/random | fold -w 100 | tr -dc 'a-z' | fold -w 100 | tr -d '\n' | xargs echo); do
```

SECRET, 11-10-64, 11-10-64, 11-10-64

```
Preparation); USES (Uses
```

(coatings; transparent gas-barrier films having silicon oxide

layers, for liq. crystal display

67-42-9, Talpa - 300

(film; transparent gas-barrier films having silicon oxide

layers, for liq. crystal display

30110-74-8, Tetramethyldisiloxane

FI: RCT (Reactant); RACT (Reactant or reagent)

transparent gas-barrier films having silicon oxide layers.

produced from tetramethyldisiloxane, for lico. crystal display)

END ANSWER 22 OF 29 CA CHEVREIGHT 2002 ACS

101L021-316

0230016-57; H011001-235; H011001-235; H011001-768; H05H001-46

Crystal Growth and Liquid Crystals

THE JOURNAL OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE

Manufacture of silicon oxide film by plasma chemical

for deposition for Ambassador: Levine

silicon oxide plasma CVD enthalpy ex

insulator; alkoxysilane plasma CVD silicon.

oxide; water resistance silicon oxide plasma

- CVD; step coverage; **silicon oxide plasma CVD**
- 16 Electric insulators and Dielectrics
16 Semiconductor devices
 plasma CVD of silicon oxide film for interlayer insulator of semiconductor device
- 17 Silanes
 PL: PEP (Physical, engineering or chemical process; RCT (Reactant; PPOB (Process); RACT (Reactant or reagent)
 alkoxy, **plasma CVD of silicon oxide film for interlayer insulator of semiconductor device**
- 17 Vapor deposition processes
 plasma, plasma CVD of silicon oxide film for interlayer insulator of semiconductor device)
- 17 331-86-9P, Silicon oxide, processes
 PL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation; USES (Process; USES (Uses)
 plasma CVD of silicon oxide film for interlayer insulator of semiconductor device
- 17 333-74-0, Hydrogen, uses
 PL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 plasma CVD of silicon oxide film for interlayer insulator of semiconductor device
- 17 333-80-1, Triethoxysilane- 2487-90-3, Trimethoxysilane
 333-62-5, Silane, processes
 PL: PEP (Physical, engineering or chemical process; RCT (Reactant; PPOB (Process); RACT (Reactant or reagent)
 plasma CVD of silicon oxide film for interlayer insulator of semiconductor device
- 1 ANSWER 23 OF 29 CA COPYRIGHT 2002 ACS
1 LEX B32B009-00
1 3 308J007-00; 308J007-14; 323C014-06; 323C14-24
1 3-2 (Plastics Fabrication and Uses)
Section cross-reference s: 17, 63
17 Transparent gas-barrier laminated packaging films
17 gas barrier film metal oxide; carbon silicon oxide
film packaging; transparency laminated film oxygen barrier; food
pharmaceutical packaging film laminated
17 Food
Pharmaceuticals
 (packaging materials for; transparent gas-barrier inorg.
 compd.-deposited packaging films,
17 Vapor deposition processes
 (plasma-excited; transparent gas-barrier inorg. compd.-deposited packaging films)
- 17 Packaging materials
 (films, transparent gas-barrier inorg. compd.-deposited packaging films)
- 17 331-86-9P, Silicon oxide, uses
 PL: FFD (Food or feed use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (manuf. of carbon-contg.; transparent gas-barrier inorg. compd.-deposited packaging films)
- 17 337-46-0, Hexamethyldisiloxane 30110-74-8, Tetramethyldisiloxane
 PL: PCT (Reactant); RACT (Reactant or reagent)
 (silicon oxide from; in transparent gas-barrier inorg. compd.-deposited packaging films)
- 1 338-59-9, PET (polyester), uses
 PL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use);

uses)
 (transparent gas-barrier incorp. compo.-deposited packaging films
 19-48-4, Magnesium **oxide**, uses 7440-44-1, Carbon, uses
 11: FPD (Feed or feed use ; FFP Properties ; TEM Technical or
 properties
 Material use ; TM Therapeutic use ; BIOC Biological study ; USES
 uses
 transparent gas-barrier incorp. compo.-deposited packaging films
 19-44-7, Oxygen, miscellaneous
 11: MSB (Miscellaneous
 transparent gas-barrier incorp. compo.-deposited packaging films
 1 ANSWER 24 OF 29 1A COPYRIGHT 2002 ACS
 1 ILM H01L011-761
 1 ILS H01L011-316
 1 1-3 Electric Phenomena
 11 Manufacture of semiconductor devices
 11 Semiconductor device silica **insulating** interlayer;
 trialkoxysilane source silica film; silsesquioxane hydride source silica
 film
 11 Transistors
 (MOS; silica **insulating** interlayers from trialkoxysilane or
 silsesquioxane hydride
 11 Vapor deposition processes
 formation of silica **insulating** interlayers from
 trialkoxysilane or silsesquioxane hydride for semiconductor devices;
 11 silsesquioxanes
 11: RCT (Reactant ; RACT Reactant or reagent)
 (hydride, source gas; for CVD of silica interlayers in semiconductor
 devices)
 1 Semiconductor device
 silica **insulating** interlayers from trialkoxysilane or
 silsesquioxane hydride
 1 Silanes
 11: RCT (Reactant ; RACT Reactant or reagent)
 (source gas; for CVD of silica interlayers in semiconductor devices)
 11 86-9, Silica, uses
 11: DEV (Device component use ; USES (Uses,
 (film; **insulating** interlayers from trialkoxysilane or
 silsesquioxane sources for semiconductor devices)
 11 78-10-4, Tetraethoxysilane 298-86-1, Triethoxysilane 2487-90-3
 , Trimethoxysilane 6485-85-4, Tripropoxysilane 6485-86-5,
 Tributoxysilane 7803-62-5, Silane, reactions
 11: RCT (Reactant); RACT Reactant or reagent)
 (source gas; for CVD of silica interlayers in semiconductor devices)
 1 ANSWER 25 OF 29 1A COPYRIGHT 2002 ACS
 1 ILM H01G004-30
 1 ICS C23C016-04; C23C016-44; C23C016-54
 1 78-10 (Electric Phenomena)
 Section cross-reference(s): 35, 75
 1 Method for depositing a dielectric and/or conductive material on
 a substrate
 1 Vapor deposition CVD; conductor elec deposition CVD
 11 Electric capacitors
 Electric conductors
 Electric insulators and Dielectrics
 Electric resistors
 Polymerization
 Vapor deposition processes
 (method for depositing a dielec. and/or conductive material on a
 substrate)
 11 Silazanes
 Siloxanes and Silicones, processes
 11: PEP (Physical, engineering or chemical process); RCT (Reactant ; PPOC

- method for depositing a dielect. and/or conductive material on a substrate)
- 16 Silanes
 RI: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); PACT (Reactant or reagent)
 alkoxysilane, method for depositing a dielect. and/or conductive material on a substrate)
- 17 Silanes, processes
 RI: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); PACT (Reactant or reagent)
 silyl, method for depositing a dielect. and/or conductive material on a substrate)
- 18 3393-06-4, Hydrogen sulfide, processes 10543-91-1, Sulfur dichloride
 30110-74-8, Tetramethyldisiloxane
 RI: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); PACT (Reactant or reagent)
 method for depositing a dielect. and/or conductive material on a substrate)
- 19 ANSWER 26 OF 29 CA COPYRIGHT 2002 ACS
 19M H01L021-316
 19C C230016-41
 19-10 (Electric insulators)
 Section cross-reference : 75
 19 Forming an insulating film
 19 insulating film plasma CVD: silicon contg
 insulating film plasma CVD
 19 Electric insulators and dielectrics
 (plasma CVD of films of
 19 Silanes
 Siloxanes and Silicones, processes
 RI: PEP (Physical, engineering or chemical process); PROC (Process)
 (plasma CVD of insulating films from
 19 Vapor deposition processes
 (plasma, of dielect. films)
 19 3395-01-4P, Silicon nitride oxide
 RI: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation); PROC (Process)
 (plasma CVD of films of)
 19 3398-30-1, Triethoxysilane 2487-90-3, Trimethoxysilane
 30110-74-8, Tetramethyldisiloxane
 RI: PEP (Physical, engineering or chemical process); PROC (Process)
 (plasma CVD of insulating films from
- 20 ANSWER 27 OF 28 CA COPYRIGHT 2002 ACS
 20M H01L031-04
 20-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 20 Solar cell sheets
 20 silicon solar cell gas barrier; silica gas barrier solar cell; polymer gas barrier solar cell
 20 Vapor deposition processes
 (plasma, manuf. of silica coated gas barrier polymer films for amorphous silicon solar cell sheets)
 20 Polysulfones, uses
 RI: DEV (Device component use); USES (Uses)
 (polyether-, silica coated gas barrier polymer films for amorphous silicon solar cell sheets)
 20 Polyethers, uses
 RI: DEV (Device component use); USES (Uses)
 (polysulfone-, silica coated gas barrier polymer films for amorphous silicon solar cell sheets)
 20 30110-74-8, Tetramethyl disiloxane
 RI: RCT (Reactant); PACT (Reactant or reagent)

manuf. of silicon solar cell sheets
silicon solar cell sheets
IT 7441-21-3, Silicon, uses 7681-16-1, Silica, uses 68154-68-9, Krypton
RI: DEV (Device component use); USES (Use)
silica coated gas barrier polymer films for amorphous silicon solar cell sheets

1 ANSWER 26 OF 29 CA COPYRIGHT 1992 ACS
2 74-11 (Electric Phenomena)
IT plasma-enhanced chemical vapor deposition of
sio2 using novel alkoxysilane precursors
plasma CVD deposition silica alkoxysilane
precursor
1 vapor deposition processes
plasma, of sio2 using novel alkoxysilane precursors
IT 7441-21-3, Silicon, uses
RI: NUU (Other use, unclassified); USES (Uses)
plasma-enhanced CVD deposition of
sio2 on silicon
IT 7447-14-5, Sodium chloride, uses
RI: NUU (Other use, unclassified); USES (Uses)
plasma-enhanced CVD deposition of
sio2 on sodium chloride
IT 7681-86-9, Silicon dioxide, formation (nonpreparative)
RI: FORM (Formation, unclassified); FORM (Formation, nonpreparative)
plasma-enhanced CVD deposition of
sio2 using novel alkoxysilane precursors
1 74-19-4 781-84-5, Tetramethoxysilane 781-30-1, Triethoxysilane
2487-90-3, Trimethoxysilane
RI: RCT (Reactant); RACT (Reactant or reagent)
plasma-enhanced CVD deposition of
sio2 using novel alkoxysilane precursors

1 ANSWER 29 OF 29 CA COPYRIGHT 1992 ACS
1 TEM B32B009-00
1 B3 B32B007-02; B32B007-19; B32B014-06; H01B013-11
24-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
IT Gas barrier type transparent electroconductive laminate for liquid
crystal
display
IT Gas barrier transparent electroconductive laminate; liq crystal
transparent electroconductive laminate
IT Optical imaging devices
electrooptical liq.-crystal, gas barrier type transparent
electroconductive laminate for
IT Vapor deposition processes
plasma, for forming gas barrier type transparent electroconductive
laminate for liq. crystal display)
IT Polyketones
RI: TEM (Technical or engineered material use); USES (Uses)
(polyester-polyether-, as substrate for forming gas barrier type
transparent electroconductive laminate for liq. crystal display
IT Polyethers, uses
RI: TEM (Technical or engineered material use); USES (Uses)
(polyester-polyketone-, as substrate for forming gas barrier type
transparent electroconductive laminate for liq. crystal display
IT Polyesters, uses
RI: TEM (Technical or engineered material use); USES (Uses)
(polyether-polyketone-, as substrate for forming gas barrier type
transparent electroconductive laminate for liq. crystal display
IT Polyesters, uses
RI: TEM (Technical or engineered material use); USES (Uses)
(sulfonates, as substrate for forming gas barrier type transparent
electroconductive laminate for liq. crystal display)
IT 74-46-0, Hexamethyl disiloxane 1185-35-3, Methyl trimethoxy silane

siloxane

SI: PEP (Physical, Engineering or Chemical process), TEM Technical or
Engineered material use ; IPAC Process ; USEI Uses

as CVD gas for forming gas barrier type transparent electroconductive
laminate for liq. crystal displays

= 10 y